



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**Atty. Dkt. No 054707-0185**

**Applicant:** Joseph P. STEINER et al.

**Title:** NOVEL PYRROLIDINE  
CARBOXYLATE HAIR  
REVITALIZING AGENTS

**Appl. No.:** 09/825,896

**Filing Date:** 04/05/2001

**Examiner:** Rebecca Cook

**Art Unit:** 1614

***APPEAL BRIEF TRANSMITTAL***

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicant hereby submits to the Board of Appeals three copies of an Appeal Brief which follow the Notice of Appeal filed June 20, 2002.

The items checked below are appropriate:

1. **XX** Appeal Brief with the Small-Entity Fee \$160.00 (in triplicate);
2. **XX** Petition for Extension of Time with Fee \$145.00;<sup>1</sup> and

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<sup>1</sup> A petition for an Extension of Time was filed August 22, 2002, to extend the time for response from August 20, 2002, to September 20, 2002. With that petition, the fee of \$55 under 37 C.F.R. § 1.17(a)(1) was paid. Thus, the present petition extends the period for response from September 20, 2002, to October 20, 2002. The enclosed check covers the difference in fee between a two-month Extension of Time under 37 C.F.R. § 1.17(a)(2) and the previously-paid-one-month extension of time under 37 C.F.R. § 1.17(a)(1).

3. XX A check in the total amount of \$305.00 is enclosed for the Appeal Brief fee and Petition for Extension of Time. The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 19-0741.

Respectfully submitted,

Date 10/21/12

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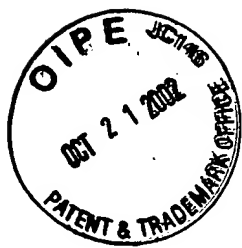
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By 

Sean A. Passino

Attorney for Applicant

Registration No. 45,943



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Attorney Docket No. 0547020185

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**APPEAL BRIEF UNDER 37 C.F.R. § 1.192**

This brief answers the final Office Action of February 20, 2002. It is filed with two additional copies of the originally signed brief. It is accompanied by the small-entity fee of \$160 under 37 C.F.R. § 1.17(c). It is timely, since it is filed within four months of the Notice of Appeal dated June 20, 2002, and is accompanied by a Petition for an additional-month Extension of Time and the fee of \$145, which is the difference between the fees under 37 C.F.R. §§ 1.17(a)(2) and (a)(1).<sup>1</sup>

**1. Real Party Interest**

GPI NIL Holdings Inc. is the real party in interest.

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<sup>1</sup> A petition for an Extension of Time was filed August 22, 2002, to extend the time for response from August 20, 2002, to September 20, 2002. With that petition, the fee of \$55 under 37 C.F.R. § 1.17(a)(1) was paid. Thus, the present petition extends the period for response from September 20, 2002, to October 20, 2002. The enclosed check covers the difference in fee between a two-month Extension of Time under 37 C.F.R. § 1.17(a)(2) and the previously-paid-one-month extension of time under 37 C.F.R. § 1.17(a)(1).

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**2. Related Appeals and Interferences**

Appellant, Appellant's legal representative, and Assignee know of no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**3. Status Of Claims**

Claims 6-8, 10-12, 14-16, 18-20, and 22-27 are pending. Claims 1-5, 9, 13, 17, and 21 are cancelled. Claims 25-27 are appealed.

**4. Status Of Amendments**

All amendments were entered.

**5. Summary Of Invention**

The present invention regards a pharmaceutical composition comprising an effective amount of a specified compound, a second hair revitalizing compound, and a pharmaceutically acceptable carrier. Specification, p. 14, ll. 5-10; p. 15, ll. 8-9.

**6. Issues**

There is one issue presented for review:

A. whether claims 25-27 are patentable under 35 U.S.C. § 101 (double patenting) in view of claims 22-24 of U.S. Patent No. 6,239,164.

## 7. Grouping Of Claims

For the purpose of this appeal only, the claims stand or fall together for the ground of rejection which Appellant contests and which applies to a group of two or more claims.

## 8. Argument

**A. The statutory double patenting rejection of claims 25-27 over claims 22-24 of U.S. Patent No. 6,239,164 is improper and should be reversed, because each set of claims differs in scope.**

An improper statutory double patenting rejection is made when the “same invention” is not claimed by two sets of claims. MPEP § 804 II. A. Nonidentical inventions may be identified by spotting embodiments that are excluded from one set of claims but not the other. Id.

Nonidentical inventions are claimed here, since the present claims embrace more embodiments in at least one aspect than the claims of the ‘164 patent. Specifically, a relevant part of present claim 25 reads as follows: “an effective amount of a compound of formula I.” On the other hand, a relevant part of the ‘164 patent’s claim 21, from which claims 22-24 depend, reads as follows: “an effective amount of a *non-immunosuppressive* pyrrolidine carboxylate or pyrrolidine amide compound *having an affinity for FKBP-type immunophilins.*” (Emphasis added). Embodiments that are excluded from the ‘164 patent’s claims 22-24 but not present Application’s claims 25-27 are believed apparent from the broadest reasonable interpretation of these claims. Cf. MPEP § 2111. Thus, the present claims are nonidentical face-to-face the claims of the ‘164 patent.

The Examiner, however, cited page 4 of the present specification and urged that the missing-functional elements are inherent properties of the recited compounds. Office action of February 20, 2002, p. 2, ll. 16-19 (e.g., "the instant compounds ... have an affinity for FKBP-type immunophilins"). It is believed that the evidence and explanation of record is insufficient to establish a prima facie case of inherency, as inherency cannot be based upon probability or speculation. Thus, the rejection is improper and should be reversed.

9. Appendix

An appendix containing a copy of the claims involved in the appeal is attached.

10. Conclusion

The rejection should be reversed and the application allowed.

Respectfully submitted,

Date 10/21/12

By Sean A. Passino

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PATENT TRADEMARK OFFICE

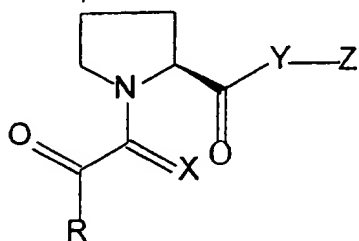
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If any [further] extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-0741.

## APPENDIX

25. A pharmaceutical composition comprising:
- (i) an effective amount of a compound of formula I:



or a pharmaceutically acceptable salt or hydrate thereof,

wherein

R is selected from the group consisting of a C<sub>1</sub>-C<sub>9</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>9</sub> straight or branched chain alkenyl, C<sub>3</sub> or C<sub>5</sub> cycloalkyl, C<sub>5</sub>-C<sub>7</sub> cycloalkenyl, and Ar<sub>1</sub>,

wherein said alkyl or alkenyl is optionally substituted with C<sub>3</sub>-C<sub>8</sub> cycloalkyl,

C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, or hydroxy,

wherein said cycloalkyl or cycloalkenyl is optionally substituted with C<sub>1</sub>-C<sub>4</sub>

alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, or hydroxy,

Ar<sub>1</sub> is selected from the group consisting of 1-naphthyl, 2-naphthyl, 2-indolyl, 3-indolyl, 2-furyl, 3-furyl, 2-thiazolyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, and phenyl,

wherein said Ar<sub>1</sub> has one to three substituents which are independently

selected from the group consisting of hydrogen, halo, hydroxyl, nitro,

trifluoromethyl, C<sub>1</sub>-C<sub>6</sub> straight or branched alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched

alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkenyloxy, phenoxy, benzyloxy, and amino;

X is selected from the group consisting of oxygen, sulfur, methylene, and H<sub>2</sub>;

Y is selected from the group consisting of oxygen and NR<sub>2</sub>, where R<sub>2</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; and

Z is selected from the group consisting of C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, and Ar<sub>2</sub>,

wherein the C<sub>2</sub>-C<sub>6</sub> straight or branched alkyl is substituted in one or more positions with Ar<sub>1</sub> as defined above, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, or cycloalkyl connected by a C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl;

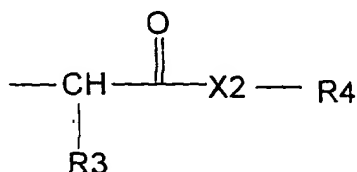
Ar<sub>2</sub> is selected from the group consisting of 2-indolyl, 3-indolyl, 2-furyl, 3-furyl, 2-thiazolyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, and phenyl,

wherein said Ar<sub>2</sub> has one to three substituents which are independently

selected from the group consisting of hydrogen, halo, hydroxyl, nitro,

trifluoromethyl, C<sub>1</sub>-C<sub>6</sub> straight or branched alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkenyloxy, phenoxy, benzyloxy, and amino;

or Z is a fragment having the following formula:



wherein



$R_3$  is a  $C_1$ - $C_9$  straight or branched alkyl or unsubstituted  $Ar_1$ , wherein said

$C_1$ - $C_9$  straight or branched alkyl is optionally substituted with  $C_3$ - $C_8$

cycloalkyl or  $Ar_1$  as defined above;

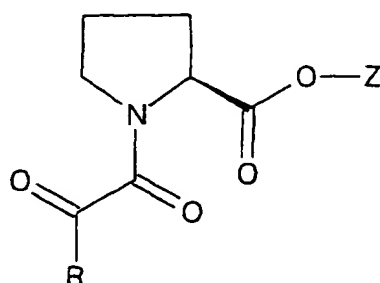
$X_2$  is O or  $NR_5$ , where  $R_5$  is selected from the group consisting of hydrogen,  $C_1$ - $C_6$  straight or branched alkyl, and  $C_2$ - $C_6$  straight or branched alkenyl; and

$R_4$  is selected from the group consisting of phenyl, benzyl,  $C_1$ - $C_5$  straight or branched alkyl or  $C_2$ - $C_5$  straight or branched alkenyl, and  $C_1$ - $C_5$  straight or branched alkyl or  $C_2$ - $C_5$  straight or branched alkenyl substituted with phenyl;

(ii) a second hair revitalizing compound; and

(iii) a pharmaceutically acceptable carrier.

26. The pharmaceutical composition of claim 25 wherein the compound is of formula II:



II

or a pharmaceutically acceptable salt or hydrate thereof,

wherein

$R$  is a  $C_1$ - $C_9$  straight or branched chain alkyl or  $C_2$ - $C_9$  straight or branched chain alkenyl  $C_3$  or  $C_5$  cycloalkyl,  $C_5$ - $C_7$  cycloalkenyl, or  $Ar_1$ ,

wherein said  $C_1$ - $C_9$  straight or branched chain alkyl or  $C_2$ - $C_9$  straight or

branched chain alkenyl is optionally substituted with  $C_3$ - $C_8$  cycloalkyl,  $C_1$ - $C_4$

alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, or hydroxy,

wherein said cycloalkyl or cycloalkenyl is optionally substituted with C<sub>1</sub>-C<sub>4</sub>

alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, or hydroxy;

Ar<sub>1</sub> is selected from the group consisting of 1-naphthyl, 2-naphthyl, 2-indolyl, 3-indolyl, 2-furyl, 3-furyl, 2-thiazolyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, and phenyl,

wherein said Ar<sub>1</sub> has one to three substituents which are independently

selected from the group consisting of hydrogen, halo, hydroxyl, nitro,

trifluoromethyl, C<sub>1</sub>-C<sub>6</sub> straight or branched alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched

alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkenyloxy, phenoxy, benzyloxy, and amino;

Z is a C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, cycloalkyl connected by a C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl, or Ar<sub>2</sub>,

wherein said C<sub>2</sub>-C<sub>6</sub> straight or branched alkyl chain is substituted in one or

more positions with Ar<sub>1</sub>,

Ar<sub>2</sub> is selected from the group consisting of 2-indolyl, 3-indolyl, 2-furyl, 3-furyl, 2-thiazolyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, and phenyl,

wherein said Ar<sub>2</sub> has one to three substituents which are independently

selected from the group consisting of hydrogen, halo, hydroxyl, nitro,

trifluoromethyl, C<sub>1</sub>-C<sub>6</sub> straight or branched alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched

alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>2</sub>-C<sub>4</sub> alkenyloxy, phenoxy, benzyloxy, and amino.

27. The pharmaceutical composition of claim 25 wherein the compound is selected from the group consisting of:

3-phenyl-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-phenyl-1-prop-2-(E)-enyl (2S)-1-(3,3,-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(3,4,5-trimethoxyphenyl)-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(3,4,5-trimethoxyphenyl)-1-prop-2-(E)-enyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(4,5-methylenedioxyphenyl)-1-propyl (2S)-1-(3,3, dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(4,5-methylenedioxyphenyl)-1-prop-2-(E)-enyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-cyclohexyl-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-cyclohexyl-1-prop-2-(E)-enyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

(1R)-1,3-diphenyl-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(1,2-dioxo-2-[2-furanyl])ethyl-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(1,2-dioxo-2-[2-thienyl])entyl-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(1,2-dioxo-2-[2-thiazolyl])ethyl-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(1,2-dioxo-2, phenyl)ethyl-2-pyrrolidinecarboxylate,

3-(2,5-dimethoxyphenyl)-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(2,5-dimethoxyphenyl)-1-prop-2-(E)-enyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

2-(3,4,5-trimethoxyphenyl)-1-ethyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(3-Pyridyl)-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(2-Pyridyl)-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(4-Pyridyl)-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(2-cyclohexyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(2-*tert*-butyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3-phenyl-1-propyl (2S)-1-(2-cyclohexylethyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3-(3-Pyridyl)-1-propyl (2S)-1-(2-cyclohexylethyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3-(3-Pyridyl)-1-propyl (2S)-1-(2-*tert*-butyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3,3-diphenyl-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate,

3-(3-Pyridyl)-1-propyl (2S)-1-(2-cyclohexyl-1,2-dioxoethyl)-2-pyrrolidinecarboxylate,

3-(3-Pyridyl)-1-propyl (2S)-N-([2-thienyl]glyoxyl) pyrrolidinecarboxylate,

3,3-Diphenyl-1-propyl (2S)-1-(3,3-dimethyl-1,2-dioxobutyl)-2-pyrrolidinecarboxylate,

3,3-Diphenyl-1-propyl (2S)-1-cyclohexylglyoxyl-2-pyrrolidinecarboxylate, and

3,3-Diphenyl-1-propyl (2S)-1-(2-thienyl)glyoxyl-2-pyrrolidinecarboxylate,

or a pharmaceutically acceptable salt, hydrate, or mixture thereof.